

p363 1-5

1. $\frac{21}{x} = \frac{x}{7}$

$x^2 = 21 \cdot 7$

$x = 7\sqrt{3}$

2. $\frac{5}{x} = \frac{x}{9}$

$x^2 = 9 \cdot 5$

$x = 3\sqrt{5}$

3. A(2,1)

B(4,8)

C(5,7)

$AB = \sqrt{2^2 + 1^2} = \sqrt{5}$

$BC = \sqrt{1^2 + 7^2} = \sqrt{50}$

$AC = \sqrt{3^2 + 6^2} = \sqrt{45}$

$\sqrt{50}^2 = \sqrt{45}^2 + \sqrt{5}^2$

Right

4. $x=3$ $y=3\sqrt{2}$

5. $x=12$ $y=6\sqrt{3}$

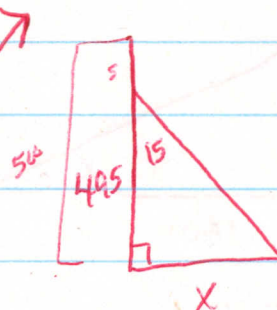
p383 1-4

1. $\tan x = \frac{16}{10}$

$x = 58.0^\circ$

p383

4.



$\tan 15 = \frac{x}{4.95}$

$x = 132.6 \text{ ft}$

2. $\cos 12 = \frac{x}{9.7}$

$x = 9.3$

3. $\cos 53 = \frac{32}{x}$

$x = 53.2$

4.

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12. $\frac{8}{RS} = \frac{RS}{14}$

$RS = 4\sqrt{7}$

13. $x^2 = 15^2 + 20^2$

$x = 25$

15. $21^2 = x^2 + 13^2$

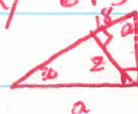
$4\sqrt{17} = x$

16. $x=9$ $y=9\sqrt{2}$

17. $x=y = \frac{13\sqrt{2}}{2}$

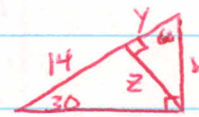
18. $y=6\sqrt{3}$ $x=12$

19.



$z = 18\sqrt{3}$

$a = 36\sqrt{3}$



20. $\frac{14\sqrt{3}}{3} = 14$ $\frac{28\sqrt{3}}{3} = 28$

$a = 28\sqrt{3}$

$z = \frac{14\sqrt{3}}{2}$

$y = \frac{14}{3}$

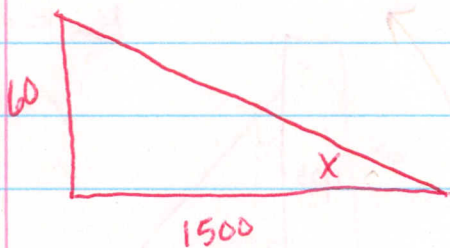
$b = \frac{28}{3}$

$\frac{30}{14} = \frac{60}{14\sqrt{3}} = \frac{90}{28\sqrt{3}}$

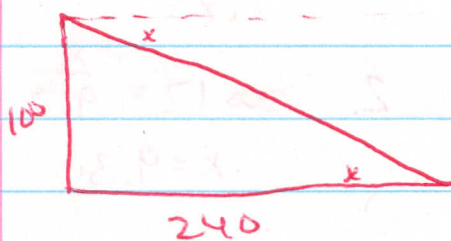
26. $3\text{ ft} = 1\text{ yd}$

$$\tan x = \frac{60}{1500}$$

$$x = 2.3^\circ$$



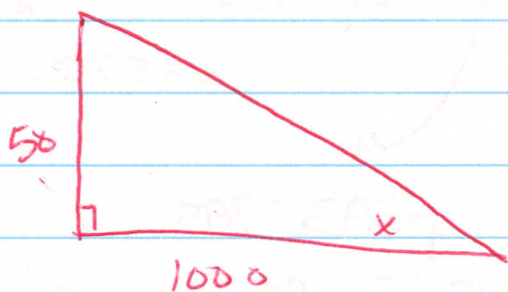
27.



$$\tan x = \frac{100}{240}$$

$$x = 22.6^\circ$$

28.



$$\tan x = \frac{50}{1000}$$

$$x = 2.9^\circ$$